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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,288

06/23/2006

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EXAMINER

MCGUTHRY BANKS, TIMA MICHELE

ART UNIT

PAPER NUMBER

1793

NOTIFICATION DATE

DELIVERY MODE

08/11/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com  
buta@oshaliang.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,288	<b>Applicant(s)</b> SADA, KOUICHI	
	<b>Examiner</b> TIMA M. MCGUTHRY-BANKS	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____.                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/23/06</u> .   | 6) <input type="checkbox"/> Other: ____.                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claims 1-12 are as originally filed.

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Minnick (US 3,645,719).

Minnick anticipates the claimed invention. Minnick teaches forming shaped bodies of iron oxide and dolomite (abstract). The iron oxide is from iron oxide-rich dust reclaimed from furnace stacks (column 2, lines 49 and 50). Regarding Claims 2 and 6, pelletizing reads on

Art Unit: 1793

pressing and forming (column 5, line 19). Regarding Claims 3 and 7, a pellet has the claimed shape. Regarding Claim 8, carbon is present in the dust (Table I).

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Anderson (US 2002/0020108 A1).

Anderson anticipates the claimed invention. Anderson teaches a composition and method for making combustible briquettes. The composition includes waste in the form of dust, powder or fines from electric arc furnaces and include iron [0011]. Regarding Claims 2 and 6, the composition is pressed in a mold [0013]. Regarding Claims 3 and 7, the briquette is in the form of a cylinder [0020]. Regarding Claim 4, preferred size is greater than 2 inches in diameter (50.8 mm) x 2 inches in length (50.8 mm), which is within the claimed range. Regarding Claim 8, aluminum and carbon are present in the dust [0014].

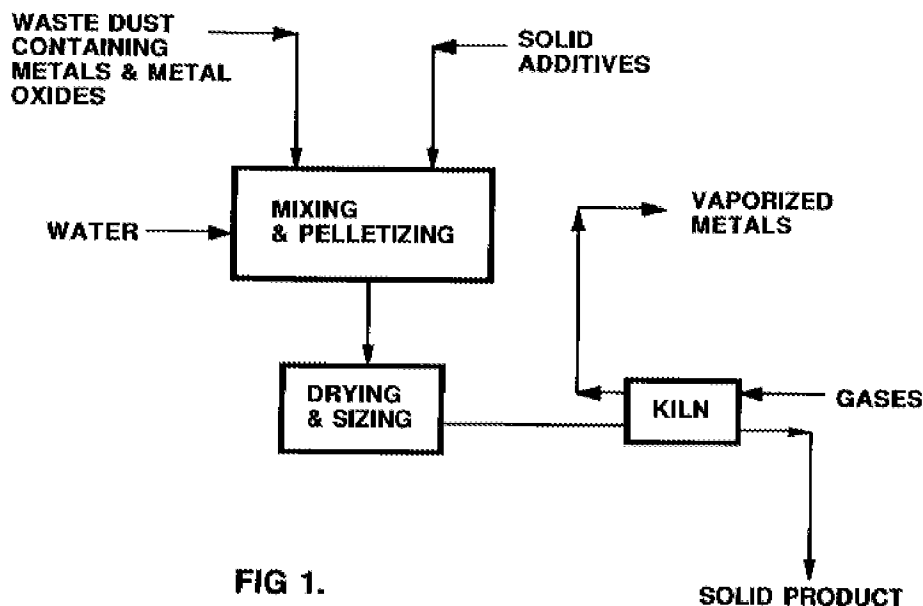
Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Nayak et al (US 6,921,427 B2).

Nayak et al anticipates the claimed invention. Nayak et al teaches cold briquetting and pelletization of ferrous or non-ferrous ores or mineral fines by iron bearing hydraulic mineral binder. The fines are from blast furnace dust and sludge, mill scale, and basic oxygen furnace dust and sludge (column 4, lines 21 and 22). Regarding Claims 2 and 6, cold briquetting reads on a mold. Regarding Claims 3 and 7, a pelletizer reads on a vertically oriented cylindrical chamber. Regarding Claim 8, the fines contain  $\text{Al}_2\text{O}_3$  (line 18). The dust is an iron bearing hydraulic mineral binder (column 3, line 67).

Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Weinwurm et al (US 5,906,671).

Art Unit: 1793

Weinwurm et al anticipates the claimed invention. Weinwurm et al teaches extraction of metals and non-metals from minerals, industrial by-products and waste materials as shown below in Fig. 1:



The waste products include waste by-products of iron and steel dust. Regarding Claims 2 and 6, pelletizing reads on pressing and forming. Regarding Claims 3 and 7, pelletizing reads on a vertically oriented cylindrical chamber. Regarding Claim 8, the reducing agents such as carbon chemically bind unwanted elements in the waste (column 3, lines 30 and 31).

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07102302 A.

JP '202 anticipates the claimed invention. JP '202 teaches a method for molding a green compact. A rubber is filled into a recess formed by the lower punch inserted into a cylindrical die, and a specified amount of an easy-flow granulated material is filled in the recess space, compressed by an appropriate method and densified. A coil above the mold and a supporting

Art Unit: 1793

plate provided with an upper punch are then lowered, a lid fixed to the lower surface of the upper punch is put into the mold, a plunger is further lowered to compress the mold in the recess and consequently to compress the granulated material (abstract). Regarding Claim 10, the lid is on the lower surface.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1793

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson.

Anderson discloses the invention substantially as claimed as stated in the rejection for claims 1 and 4 above. However, Anderson does not disclose that the ratio of height to diameter is within 0.7 to 0.8 as claimed. Anderson does teach that the size of the briquette should be greater than 2 in x 2 in, a range that though broader reads on the claimed range. In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. See MPEP § 2144.05.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. SU 1574667 teaches a briquette made of FeSi that are press molded to 50 mm in diameter and 45 mm in height (abstract). JP 41-011127, JP 62-153153 and JP 50-062117 were cited on the international search report for the current invention. Based on oral translations of these patents, only JP '117 taught the dimensions of the agglomerated dust. The diameter and height are 10-20 mm (page 2).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art Unit  
1793

/T. M. M./  
Examiner, Art Unit 1793  
7 August 2008